

AMENDMENTS TO THE CLAIMS

WE CLAIMS (clean copy)

- 5 1. (currently amended) A method of cascaded policing packet traffic comprising
the steps of:
- (a) policing a service at a service rate guarantee, the service having a first class
 traffic capacity having a first class rate guarantee and a second class traffic
 capacity having a second class rate guarantee, which is lower than the first class
10 rate guarantee, the service rate guarantee being equal to the sum of the first
 class rate guarantee and the second class rate guarantee;
- (b) policing the first class traffic capacity at the first class rate guarantee;
- (c) if not all of the first class traffic capacity is being used, transmitting a portion of
 the second class traffic capacity on the left over capacity of the first class, the
15 portion being less or equal to the second class traffic capacity; and
- (d) policing the remaining portion of the second class traffic capacity, which is not
 being policed on the left over capacity of the first class, at an aggregate rate of
 the first class rate guarantee and the second class rate guarantee.
- 20 2. (currently amended) The method according to claim 1, wherein the first class
traffic capacity being marked as conforming if allowed by the first class rate guarantee
and non-conforming if found to exceed the first class rate guarantee.
3. (currently amended) The method according to claim 1, wherein the second
25 class traffic capacity being marked as conforming if allowed by the aggregate rate of
 the first class rate guarantee and the second class rate guarantee and non-conforming if
 found to exceed the aggregate rate of the first class rate guarantee and the second class
 rate guarantee.
- 30 4. (currently amended) The method according to claim 1, wherein the steps (b)
and (d) comprise policing at the traffic class rate guarantee and a traffic class burst
tolerance guarantee.

5. (currently amended) A method of cascaded policing packet traffic comprising the steps of:

- 5 (e) policing a service at a service rate guarantee, the service having a plurality of traffic capacities having a respective plurality of traffic classes rate guarantees arranged in a descending order of priorities, the service rate guarantee being equal to the sum of the plurality of traffic classes rate guarantees;
- (f) policing at least one of the plurality of traffic capacities at its respective traffic class rate guarantee;
- 10 (g) if not all of the at least one of the plurality of traffic capacities is being used, transmitting respective portions of the plurality of traffic capacities, which have lower traffic classes rate guarantees, on the left over capacity of said at least one of the plurality of traffic capacities, the portion being less or equal to the sum of the plurality of traffic capacities; and
- 15 (h) policing each of the remaining portions of said plurality of traffic capacities, which have lower traffic classes rate guarantees and have not being policed on the left over capacity of the at least one of the plurality of traffic capacities, at an aggregate rate of the plurality of traffic classes rate guarantees.

20 6. (currently amended) The method according to claim 5, wherein the at least one of the plurality of traffic capacities is marked as conforming if allowed by its respective traffic class rate guarantee and non-conforming if found to exceed its respective traffic class rate guarantee.

25 7. (currently amended) The method according to claim 5, wherein each of the remaining portions of the plurality of traffic capacities is marked as conforming if allowed by the aggregate rate of the plurality of traffic classes rate guarantees and non-conforming if found to exceed the aggregate rate of the plurality of traffic classes rate guarantees.

8. (currently amended) A method of cascaded policing packet traffic comprising the steps of:

- (i) policing a service at a service rate guarantee, the service having a plurality of N traffic capacities, C_i , $i=1, 2, \dots, N$ and $N>2$, having a respective plurality of traffic classes rate guarantees, R_i , $i=1, 2, \dots, N$ and $N>2$ arranged in a descending order of priorities, the service rate guarantee being equal to $\sum_{i=1}^N R_i$;
- (j) policing the C_i traffic capacity at its respective traffic class rate guarantee R_i ;
- (k) if not all of the C_i traffic capacity is being used, transmitting a portion of the C_1, C_2, \dots, C_{i-1} traffic capacities on the left over capacity of the C_i traffic capacity, the portion being less or equal to $\sum_{i=1}^N C_i$; and
- (l) policing each of the remaining traffic capacities C_1, C_2, \dots, C_{i-1} , which is not in step (k), at an aggregate rate RA_i , which is $RA_i \sum_{i=1}^N R_i$.

9. (currently amended) The method according to claim 8, further comprising the steps of:

- (m) policing a service at a service burst tolerance guarantee, the service having a plurality of N traffic capacities, C_i , $i=1, 2, \dots, N$ and $N>2$, having a respective plurality of burst tolerance guarantees, BT_i , $i=1, 2, \dots, N$ and $N>2$;
- (n) policing the C_i traffic capacity at its respective burst tolerance guarantee BT_i ;
- (p) if not all of the C_i traffic capacity is being used, transmitting a portion of the C_1, C_2, \dots, C_{i-1} , traffic capacities on the left over capacity of the C_i traffic capacity, the portion being less or equal to $\sum_{i=1}^N C_i$; and

(q) policing each of the remaining traffic capacities C_1, C_2, \dots, C_{i-1} , which is not in step (p), at an aggregate burst tolerance guarantee BA_i , which is

$$BA_i = \sum_{i=1}^N BT_i .$$

- 5 9a (new) The method as described in claim 8, wherein each of the $C_i, i = 1, 2, \dots, N$ and $N > 2$, traffic capacities being marked as conforming if allowed by its respective traffic class rate guarantee $R_i, i = 1, 2, \dots, N$ and $N > 2$ and non-conforming if found to exceed its respective traffic class rate guarantee, $R_i, i = 1, 2, \dots, N$ and $N > 2$.
- 10 9b. (new) The method as described in claim 8, wherein each of the $C_1, C_2, \dots, C_{i-1}, \dots$, traffic capacities being marked as conforming if allowed by the aggregate rate RA_i , which is $RA_i = \sum_{i=1}^N R_i$ and non-conforming if found to exceed the aggregate rate RA_i which is $RA_i = \sum_{i=1}^N R_i$.
- 15 10. (currently amended) A policer performing the steps of the method as described in claim 1.
11. (currently amended) A policer performing the steps of the method as described in claim 5.
- 20 12. (currently amended) A policer performing the steps of the method as described in claim 8 .
13. (currently amended) The policer according to claim 12 implemented as software running on a processor .
- 25 14. (currently amended) The policer according to claim 10 implemented as

software running on a processor.

15. (currently amended) The policer according to claim 11 implemented as software running on a processor.

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16. (currently amended) A processing platform readable medium having stored thereon processing platform executable instructions which when executed:

- (v) police a service at a service rate guarantee, the service having a first class traffic capacity having a first class rate guarantee and a second class traffic capacity having a second class rate guarantee which is lower than the first class rate guarantee, the service rate guarantee being equal to the sum of the first class rate guarantee and the second class rate guarantee;
- (w) police the first class traffic capacity at the first class rate guarantee;
- (x) if not all of the first class traffic capacity is being used, transmit a portion of the second class traffic capacity on the left over capacity of the first class, the portion being less or equal to the second class traffic capacity; and
- (y) police the remaining portion of the second class traffic capacity, which is not being policed on the left over capacity of the first class, at an aggregate rate of the first class rate guarantee and the second class rate guarantee.

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17. (currently amended) An apparatus for cascaded policing packet traffic comprising:

- (r) a policer, policing a service at a service rate guarantee, the service having a first class traffic capacity having a first class rate guarantee and a second class traffic capacity having a second class rate guarantee which is lower than the first class rate guarantee, the service rate guarantee being equal to the sum of the first class rate guarantee and the second class rate guarantee;
- (s) a policer, policing the first class traffic capacity at the first class rate guarantee;
- (t) a transmitter, transmitting a portion of the second class traffic capacity on the left over capacity of the first class, if not all of the first class traffic capacity is being used, the portion being less or equal to the second class traffic capacity; and

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(u) a policer, policing the remaining portion of the second class traffic capacity, which is not being policed on the left over capacity of the first class, at an aggregate rate of the first class rate guarantee and the second class rate guarantee.

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18. (new) The apparatus as described in claim 17, wherein the policer comprises means for marking the first traffic capacity as conforming if allowed by the first class rate guarantee and non-conforming if found to exceed the first class rate guarantee.

10 19. (new) The apparatus as described in claim 17, wherein the policer comprises means for marking the second traffic capacity as conforming if allowed by aggregate rate of the first class rate guarantee and the second class rate guarantee and non-conforming if found to exceed the aggregate rate of the first class rate guarantee and the second class rate guarantee.

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